Earth Observation Data Scientist - Fixed Term (18 Months)

Location: Edinburgh (hybrid). You must have a right to work in the UK.

About us

Earthwave is a cutting-edge data science company that uses satellite data to predict, understand and prevent the effects of climate change. We are part of multiple international consortia which deliver scientific research and processing algorithms using a range of Earth Observation data and ground-based sensors for monitoring global ice trends; quantifying environmental changes; and making satellite data easily accessible and understandable. As such, we operate the data and information portal cs2eo.org and produce the CryoTEMPO-EOLIS products on behalf of the European Space Agency, as well as contribute to activities in the preparation and design of new satellite missions.

About you

We are looking for a Data Scientist with a scientific degree or equivalent to work on our Earth Observation projects, initially for a fixed-term of 18 months, however with a view to extend. This will include scientific research, data analysis, algorithm design and data visualisation. You should have a keen interest in problem solving and the desire to challenge findings that enable continuous improvement.

An interest in Earth Observation and geospatial Analysis with Python is desirable, and the position is ideal for someone looking for an opportunity to work on a wide range of projects. If you have an interest in geospatial data visualisation and an eye for aesthetics, that would also be considered an advantage.

You must have a right to work in the UK, and be able to work from our office in Edinburgh at least one day a week. Candidates based in Scotland's Central Belt will be favoured over those commuting from elsewhere.

Responsibilities

We're a small but growing company so you'll get involved in all aspects of our projects including data analysis, developing and writing algorithms, data engineering and documentation/training. It's exciting and rewarding work in which no two days are the same. You will have the opportunity to make a genuine impact, both within the company and the industry as a whole.

- Analysing and experimenting with satellite data sets using Python libraries and other geospatial tools.
- Discover, implement, verify and validate novel geospatial data processing algorithms.
- Contribute to Scientific Research on environments such as mountain glaciers and polar ice shelves, potentially being involved in Scientific publications.
- Perform statistical analysis on our digital elevation products that have been developed over land ice across the world. This is part of our CryoTEMPO-EOLIS project (https://cryotempo-eolis.org/).

- Contribute to project documentation: e.g. our contracts with the European Space Agency require user requirement definitions, algorithm definition documents and verification and validation reports.
- Manage your workload timelines and understand project dependencies.
- Get involved in a variety of work across the business where needed.

Essential skills

- 0 – 3 years data science or technical analysis experience.
- Solving data science and/or geospatial processing problems using Python and related data manipulation libraries such as Pandas and Numpy.
- Either experience or a strong interest in working with satellite and Earth Observation datasets (or similar datasets).
- Strong understanding of statistical methods and their applications.
- Creative, curious and committed with the ability to work independently.

Desirable skills

- Experience or a good eye for visualisations, such as animations, maps and videos.
- Interest in presenting, storytelling and scientific outreach.
- Software engineering fundamentals, including documentation, version control, sharing code amongst the members of a small team and basic software design patterns.
- Experience or interest in the field of cryosphere.

Do you have any other skills you'd like us to know about? We are a small company and are therefore always welcoming of new expertise.

What does it mean to work with us?

- We are a small but growing team with a range of different backgrounds really enjoying the challenge of running a small business in the space sector. This is an exciting time to join us, since you'll help to shape the company of the future!
- We care about the environment and all our projects and services are focused on understanding, predicting and preventing the effects of climate change on our planet. We take pride in the quality and efficiency of our work as we think a topic as serious as climate change deserves care and attention. If you think the same, you'll enjoy the opportunity to work with us!
- We enjoy a hybrid working style, giving us the flexibility to work from home some days, but also to look forward to meeting up in person at our Edinburgh office. We recognise the benefits of both hybrid and flexible working while emphasising the importance of collaboration, and you will have the opportunity to balance both working from home, as well as spending set days in person at our office.
- We believe a healthy work-life balance leads to a healthier business.
- We are committed to Fair Working principles; we strive for a positive work environment that values our employees, and we respect individuals' differences.
- You'll enjoy benefits including dental insurance, fitness scheme contribution, a cycle to work scheme and the ability to purchase additional annual leave days beyond your standard entitlement.

● We have fun working, since we truly care about the work that we are doing.

To apply, please send us your CV and cover letter, as well as a short (max 300 lines) Python script that demonstrates your skills, motivation, history or experience to jobs@earthwave.co.uk. Feel free to be inventive.

```python
def contact_us(creds: Credentials):
    auth_string = f'user={creds.client_id}\1auth=Bearer {creds.token}\1\1'

    msg = MIMEText(
        'I would like to apply for the position of Data Scientist!')
    msg['to'] = 'jobs@earthwave.co.uk'
    msg['from'] = 'eager.applicant@gmail.com'
    msg['subject'] = 'Earth Observation Data Scientist Job Application'

    with smtplib.SMTP_SSL('smtp.gmail.com', 465) as server:
        server.login('user', base64.b64encode(
            auth_string.encode('ascii')).decode('ascii'))
        server.sendmail(creds.client_id, msg['to'], msg.as_string())
```